

PATENT

Our Docket No. 1874-4014US2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Nissim MASS
Yuval LIEBER

Art Unit: TBA

Examiner: TBA

Divisional of
Serial No. : 09/641,949
Filed: August 21, 2000

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For : MODIFIED SHUSS KNITTED NETTING

Commissioner of Patents
U.S. Patent & Trademark Office
Washington, DC 20231

PRELIMINARY AMENDMENT

Sir:

Kindly amend the above-identified application prior to examination on the merits as follows:

IN THE SPECIFICATION:

Page 1, cancel lines 15-16 in their entirety and rewrite them as follows:

--In FIG. 1, Raschel knitted netting 10, including shuss (schuss), or "lateral" ribbons 12, and franze (longitudinal) ribbons 14, also known as franse ribbons, is shown and further described in U.S. Patent No. 5,104,714 to Lieber et al.--

Page 3, line 11, after "machine." insert the following: -- The netting according to the present invention may have at least one modified shuss 18, may include modified shusses 18 located along

the outside edges of the netting, or all of the shusses of the netting may be of the modified design.

Each modified shuss may be formed from a plurality of ribbons or from a single ribbon. --

Page 3, cancel line 13 in its entirety and rewrite the lines as follows:

--polyolefin ribbons (also known as franse ribbons) and lateral polyolefin ribbons (also known as schuss ribbons) knitted with the longitudinal polyolefin--.

Page 6, cancel lines 3 and 4 in their entirety and rewrite them as follows:

--Define an average length (A), i.e., the base, between two triangle legs each having a length (S/2), by unrolling some of the knitted netting, measuring the total length of ten such "bases" and dividing that total length by 10 to define the average length--.

Page 6, line 7, delete "between" and insert --of-- therefor.

Page 6, after line 15, please insert the following:

--In summary the calculation may be described as

$$100 \times \frac{\text{measured shuss length}}{\text{calculated shuss length}} = \% \text{ modification.}$$

Therefore the modified, i.e., actual, lateral/shuss ribbon length may be defined as being at least 10% greater in length than the calculated lateral/shuss ribbon length, which is synonymous with the definition, a modified or actual lateral/shuss length that is 110% of a calculated lateral/shuss length.--

Page 8, line 16, after the term “applied.” insert the following:

--The shrinkage-elongation curve for modified shuss netting prepared in accordance with the present invention is depicted in Figure 6. By noting the grid projected by the % Shrinkage and % Elongation indicia on the x-y axes of Figure 6, it can be readily seen that for the modified shuss netting produced in accordance with the present invention at elongation of between about 10% and about 20%, the modified shuss netting exhibits shrinkage of greater than 0% and up to about 10%; at elongation of between about 20% and about 50% the modified shuss netting in accordance with the present invention exhibits shrinkage of between more than 0% and up to about 10%; at elongation of between about 50% and about 80%, the modified shuss netting in accordance with this invention exhibits a shrinkage of between about 10% and about 30%; at elongation of between about 80% and about 100% the modified shuss netting in accordance with the present invention exhibits a shrinkage of between about 20% and about 50%.--

IN THE CLAIMS:

Cancel claims 1-4 and 7-8 and amend claims 5 and 6 as follows:.

5. (Amended) A method of producing knitted netting [in a knitting machine],
comprising:

supplying lateral polyolefin ribbons [;] and [supplying] longitudinal polyolefin
ribbons to a knitting machine; [adjusting at least one of the lateral polyolefin ribbon paths in the
knitting machine;]

forming at least one modified lateral ribbon having an actual ribbon length that is
at least 10% greater than a calculated ribbon length while knitting the lateral polyolefin ribbons
[knitted] with the longitudinal polyolefin ribbons to form a knitted netting having at least one
modified lateral ribbon [;

wherein said step of adjusting at least one of the lateral polyolefin ribbons paths
results in a lateral polyolefin ribbon in the knitted netting having an actual length more than
110% of the length of a calculated shuss length for the knitted netting.]

6. (Amended) The [A] method [of producing knitted netting in a knitting machine
wherein the] according to claim 5, wherein [step of adjusting at least one of the lateral
polyolefin] the modified ribbon [paths further comprises] is formed by using a corrugated trick
plate in the knitting machine.

Please add the following new claims:

- 9. The method according to claim 5, comprising forming modified lateral polyolefin ribbons along outside edges of said knitted netting.
10. The method according to claim 5, wherein all of said lateral polyolefin ribbons are formed to have an actual length that is at least 10% greater than said calculated ribbon length.
11. The method according to claim 5, wherein said at least one modified lateral ribbon is formed to have an actual length that is at least 30% greater than said calculated ribbon length.
12. The method according to claim 10, wherein all of said lateral polyolefin ribbons are formed to have an actual length that is at least 30% greater than said calculated ribbon length.
13. A process of producing knitted netting exhibiting reduced lateral shrinkage, comprising:

feeding longitudinal and lateral polyolefin ribbons to a knitting machine, knitting said longitudinal polyolefin ribbons with at least one modified lateral polyolefin ribbon in a knitting machine by forming at least one modified lateral ribbon having an actual ribbon length that is at least 10% greater than a calculated ribbon length to form a knitted netting which upon elongation up to 100% exhibits reduced lateral shrinkage relative to knitted netting produced without said at least one modified lateral ribbon.

14. The process according to claim 13, comprising knitting said longitudinal polyolefin ribbons with a plurality of modified lateral polyolefin ribbons.

15. The process according to claim 13, wherein said lateral shrinkage is about 12% upon elongation of about 60%.

16. The process according to claim 14, wherein said lateral shrinkage is greater than 0 % lateral shrinkage and less than 10% upon elongation of between about 20% and about 50%.

17. The process according to claim 14, wherein said lateral shrinkage is between about 10 % and about 20% upon elongation of between about 50% and about 70%.

18. A process of producing knitted netting exhibiting reduced lateral shrinkage, comprising:

feeding longitudinal and lateral polyolefin ribbons to a knitting machine, knitting said longitudinal polyolefin ribbons with at least one modified lateral polyolefin ribbon in a knitting machine by forming at least one modified lateral ribbon having an actual ribbon length that is at least 30% greater than a calculated ribbon length to form a knitted netting which exhibits reduced lateral shrinkage upon elongation up to 100% relative to knitted netting produced without said at least one modified lateral ribbon.

19. The process according to claim 18, comprising knitting with a plurality of said modified lateral polyolefin ribbons.

20. The process according to claim 19, wherein said lateral shrinkage is about 12% upon elongation of about 60%.

21. The process according to claim 19, wherein lateral shrinkage is greater than 0 % and less than 10% upon elongation of between about 20% and about 50%.

22. The process according to claim 19, wherein said lateral shrinkage is between about 10 % and about 20 % upon elongation of between about 50 % and about 70 %.

23. A method of producing knitted netting, comprising:
knitting polyolefin ribbons with a trick plate having at least one outwardly curved surface element to form knitted netting having longitudinal polyolefin ribbons and lateral polyolefin ribbons, wherein at least one of said lateral polyolefin ribbon is modified to have an actual length which is at least 10% greater than a calculated ribbon length, to produce knitted netting which exhibits reduced lateral shrinkage upon elongation up to 100%.

24. The process according to claim 23, comprising knitting with a trick plate having a plurality of outwardly curved surface elements.

25. The process according to claim 23, wherein said lateral shrinkage is about 12% upon elongation of about 60%.

26. The process according to claim 23, wherein said plurality is greater than 0 % and lateral shrinkage is less than 10% upon elongation of between about 20% and about 50%.

27. The process according to claim 23, wherein said lateral shrinkage is between about 10 % and about 20% upon elongation of about 50% and about 70%.

28. The process according to Claim 23, wherein said lateral shrinkage is between about 20% to about 30% upon elongation of between about 50% and about 80%.

29. The process according to Claim 14, wherein said lateral shrinkage is between about 20% to about 30% upon elongation of between about 50% and about 80%.

30. The process according to Claim 19, wherein said lateral shrinkage is between about 20% to about 30% upon elongation of between about 50% and about 80%.

31. The process according to Claim 14, wherein said lateral shrinkage is between 20% to about 20 % to about 50 % upon elongation of between about 80 % and 100 %.

32. The process according to Claim 19, wherein said lateral shrinkage is between about 20 % to about 50 % upon elongation of between about 80 % and about 100 %.

33. The process according to Claim 23, wherein said lateral shrinkage is between about 20 % to about 50 % upon elongation of between about 80 % and about 100 %.--

REMARKS

Claims 5, 6 and 9-33 are pending in the application. Claims 1-4, 7 and 8 have been canceled. The newly added claims are fully supported by the original disclosure, drawings and original appended claims. No new matter has been introduced. Examination is respectfully requested.

AMENDMENTS TO THE SPECIFICATION AND NEW CLAIMS:

The above amendments to pages 1 and 3 of the specification have been previously approved by the Examiner. The above changes to page 6, lines 3, 4 and 7 are similar to changes previously approved by the Examiner, except that the change at page 6, line 7 now provides an alternative way of describing the modified shuss by stating that the “actual, lateral/shuss ribbon length may be defined as being at least 10% greater in length than the calculated lateral/shuss ribbon length”, which is synonymous with the original language in the specification “a modified or actual lateral/shuss length that is 110% of a calculated lateral/shuss length.” Therefore, the change

to page 6, line 7 does not constitute new matter.

The specification has also been amended at page 8 by describing the data of Figure 6 by projecting a grid defined by the % Shrinkage and % Elongation indicia on the x-y axes of Figure 6. Since the insertion to page 8, line 16, is expressly shown in the x-y plot of Figure 6, no new matter has been added to the specification.

New Claims 16, 17, 21-22 and 26-32 recite shrinkage and elongation values obtained from the projected grid of Figure 6 and the shrinkage vs. elongation curve.

CONCLUSION:

It is respectfully submitted that the claimed invention is not taught or suggested by the references of record considered by the Examiner, and therefore the application is in condition for allowance.

Preliminary Amendment
Division. of Ser. No. 09/641,949

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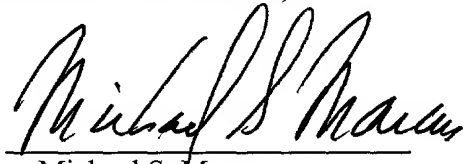
AUTHORIZATIONS:

The Commissioner is hereby authorized to charge any additional fees which may be required for the timely consideration of this amendment under 37 C.F.R. §§ 1.16 and 1.17, including any extension of time, or credit any overpayment to Deposit Account No. 13-4500, Order No. 1874-4014US2.

Respectfully submitted,

MORGAN & FINNEGAN, L.L.P.

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By: 
Michael S. Marcus
Registration No. 31,727
(202) 857-7887 Telephone
(202) 857-7929 Facsimile

CORRESPONDENCE ADDRESS:

MORGAN & FINNEGAN, L.L.P.
345 Park Avenue
New York, New York 10154
(212) 758-4800 Facsimile
(212) 751-6849 Telecopier